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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,881	08/13/2001	Konstantin Konson	DE920000074US1	8141

7590 12/30/2004

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EXAMINER	
TSAI, SHENG JEN	

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/928,881	KONSON ET AL.	
	Examiner	Art Unit	
	Sheng-Jen Tsai	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☒ Claim(s) *17-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 are presented for examination in this application (09,928,881).

Claim Objections

2. Claims 4-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, **the claims 4-13 have not been further treated on the merits.**

As for claim 4, it is a multiple dependent claim as the claim language stating that "the method according to one of the preceding claims," which are claims 1, 2, or 3. However, claim 3 itself is also a multiple dependent claims according to claim 1 or 2. Hence this is a case where a multiple dependent claim (claim 4) depends on another multiple dependent claims (claim 3). Correction is required.

As for claims 5-13, the same explanation provided for claim 4 above applies. Correction is required.

3. Claims 17-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, **the claims 17-24 have not been further treated on the merits**.

As for claim 17, it is a multiple dependent claim as the claim language stating that "the method according to one of the preceding claims," which are claims 14, 15, or 16. However, claim 16 itself is also a multiple dependent claims according to claim 14 or

15. Hence this is a case where a multiple dependent claim (claim 16) depends on another multiple dependent claims (claim 16). Correction is required.

As for claims 18-24, the same explanation provided for claim 4 above applies. Correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "**said object description** " in the text "initializing said new object with the values taken from **said object description**." There is insufficient antecedent basis for this limitation in the claim. There is no mention of the "object description" in the entirety of claim 1, and there is no telling at which step the "object description" is introduced in the sequence of steps.

Clarifications are required to define the scope and extent of this claim.

Claims 2-13 are rejected by virtue of being dependent on claim 1.

Accordingly, **the claims 1-3 have not been further treated on the merits**.

Moreover, **claims 4-13 have not been further treated on the merits** as explained earlier due to the objection of multiple dependent claims depending on other multiple dependent claims.

6. Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Reiter et al. (U.S. 5,752,243).

As to claim 14, Reiter et al. disclose **a method for persistently storing objects** [a computer method and storage structure for storing and accessing multidimensional data is provided (abstract); figure 2 shows the persistent secondary storage unit (item 23)] **of an object oriented environment** [figure 5 shows an instance of the object oriented environment] **established on a computer system** [a computer method and storage structure for storing and accessing multidimensional data is provided (abstract); figure 2 shows the CPU unit (item 25)] **having a volatile memory** [figure 2 shows the volatile memory unit, the RAM (item 22)] **and a persistent storage** [figure 2 shows the persistent secondary storage unit (item 23)], **the method comprising the steps of:**

allocating in said volatile memory segments, that is, pieces of memory [figure 4 shows how the memory are allocated, including the data area for storing the segments (figure 3A, item 28); a tree manager provided by the present invention stores data such as pointers, variable length data records, other B-trees, and directories in a multidimensional B-tree (column 3, lines 3-6)];

creating a first list (segment map) containing first references to said segments [figure 4 shows how the memory are allocated, including the first list (key value table) containing references to the segment (figure 3A, item 26; figure 3D); the nodes are

indexed by a primary key value (the first list) while the subnodes in a subtree are indexed by a secondary key values (the second list) (abstract)];

creating a second list (object map) containing second references to blocks, that is, portions of said segments [figure 4 shows how the memory are allocated, including the second list (subnode table) containing references to blocks (figure 3A, item 27; figure 3D); the nodes are indexed by a primary key value (the first list) while the subnodes in a subtree are indexed by a secondary key values (the second list) (abstract)];

allocating a block of one of said segments [figure 4 shows how the memory are allocated, including the data area associated with a block (subnode) of a segment (Key value table) as shown in figure 3A, item 28; because secondary storage is often times logically divided into fixed-size blocks or pages, units of data in an MDB-tree are physically divided into page-size subtrees (column 3, lines 10-12); an MDB-tree is written to the secondary storage device and read from the secondary storage device in page/block units (column 6, lines 62-64)],

creating an object description by saving the values owned by the object of the variables belonging to its class into said allocated block [figure 5 shows the object description containing variables are associated with each object and block (for examples, item 118, 120, 122, 124, 126, 138, 144 and 146)];

adding a new element to said second list containing the particular reference to said created object description [figure 8A shows the flow diagram of the process of

adding a new element, item 160 indicates the step of selecting page (block) in which the new element unit should be added];

determining the address of the object description of another object referenced in said object [figure 5 shows the use of pointers for one object to reference another object and the associated object description, which implies that the address of the object and the object description being referenced has to be determined so that the pointer can be set accordingly] ;

setting the address of said respective object description as the reference in the created object description [figure 8B, a continuation of the process of adding a new element as shown in figure 8A, shows the step of storing pointer to the new page/block in pointer node, hence setting the address of the object description];

storing said second list (object map) on said persistent storage [the entire storage structure shown in figure 4, including the subnode table (the second list), is stored back to the secondary storage after the operations of insertion, modification, and/or deletion are performed at RAM; an MDB-tree is written to the secondary storage device and read from the secondary storage device in page/block units (column 6, lines 62-64)] ;

storing the segments referenced by said first list (segment map) on said persistent storage [the entire storage structure shown in figure 4, including the segment (the data area), is stored back to the secondary storage after the operations of insertion, modification, and/or deletion are performed at RAM; an MDB-tree is written to the secondary storage device and read from the secondary storage device in page/block units (column 6, lines 62-64)]; **and**

storing said first list (segment map) on said persistent storage [the entire storage structure shown in figure 4, including the key value table (the first list), is stored back to the secondary storage after the operations of insertion, modification, and/or deletion are performed at RAM; an MDB-tree is written to the secondary storage device and read from the secondary storage device in page/block units (column 6, lines 62-64)].

As to claims 15 and 16, Reiter et al. teach that **the first** (the key value table shown in figure 4) **and/or the second list** (the subnode table shown in figure 4) are organized using a multidimensional **B-tree structure** (abstract), as shown in figures 3A, 3B, 3C, and 3D. Note that B-tree is a special type of **ordered lists**.

Conclusion

8. Claims 1-16 are rejected as explained above.

Claim 17-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, **the claims 17-24 have not been further treated on the merits**.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheng-Jen Tsai whose telephone number is 571-272-4244. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheng-Jen Tsai
Examiner
Art Unit 2186

December 20, 2004

PIERRE BATAILLE
PRIMARY EXAMINER
12/23/04